## January 13, 2015

MEMORANDUM TO: Sunil Weerakkody, Chief

PRA Operations and Human Factors Branch

Division of Risk Assessment

Office of Nuclear Reactor Regulation

FROM: Michael Montecalvo, Reactor Operations Engineer /RA/

PRA Operations and Human Factors Branch

Division of Risk Assessment

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SUBJECT: SUMMARY OF DECEMBER 17, 2014 PUBLIC MEETING TO

CONTINUE DISCUSSIONS BETWEEN THE NRC AND INDUSTRY RISK-INFORMED STEERING COMMITTEES

(RISC)

On December 17, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting to continue discussions between the NRC and industry risk-informed steering committees (RISC). The purpose of the meeting was to engage the industry and public in a discussion of the progress of the working groups formed by the RISCs and provide a forum for discussion of potential topics for the committees to consider for 2015. The meeting notice is available in the Agencywide Documents Access and Management System (ADAMS) Accession Number ML14309A034.

The NRC working group leaders of the two working groups provided updates on the status including public meetings held, planned interactions with the industry working groups in the future, and the deliverables. The industry working group leaders provided a status update on the white papers that will be provided to the NRC for comment. The NRC review period is expected to be completed by January with presentation to the RISCs at the next public meeting. The presentation provided by the industry working group leads is available in ADAMS Accession Number ML14352A094. The remainder of the meeting was spent discussing potential topics for consideration by the RISCs for 2015. The industry RISC members co-Chair led their discussion of topics: development of methods to support realistic external hazard analysis; treatment of external hazards in risk-informed regulation; and finalization of NUREG-1855. "Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decision Making" and Electric Power Research Institute (EPRI) work on uncertainty. The industry presentation on RISC priorities for 2015 is available in ADAMS Accession Number ML14352A087. The NRC RISC Chair led the discussion on the NRC priorities not discussed already: Risk Prioritization Initiative (RPI), Risk-Management Regulatory Framework (RMRF), and issues with crediting "flex" equipment in licensee probabilistic risk assessments (PRA). A list of individuals that participated in the meeting is provided as an enclosure to this document. No feedback forms were received after the meeting.

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### Opening comments

The NRC RISC Chair opened the meeting stating that the purpose of the meeting was to provide a brief update from working groups and discuss potential topics for the RISCs to consider for 2015. The industry RISC co-Chair commented on the success the RISCs have realized with the working groups and the progress they have made so far.

## PRA Technical Adequacy Working Group

NRC staff gave a brief update about the public meetings held since the last RISC meeting. Industry staff gave a presentation on the status of the white paper that the industry is developing for review by the NRC. The industry staff anticipates a quick review of the white paper since there have been significant interactions in public meetings between the NRC and industry working groups throughout the process. The white paper will propose both new guidance and changes to existing guidance. The industry RISC co-Chair suggested that the approval of the white paper by the two RISCs should be treated as an agreement between the NRC and industry. NRC staff cautioned the reviewers to ensure there is no regulatory conflict with current documentation or processes with any new processes or documents that will be suggested by the white paper. The NRC RISC Chair requested that the discussion at the next public meeting include timelines for the proposed document revisions.

### Treatment of Uncertainty in Decision Making Working Group

NRC Staff provided an update of interactions between the NRC and industry working groups since the last RISC meeting. This included a public meeting run as a workshop that was completed in November. The participants (NRC and industry) agreed that it was a worthwhile, beneficial workshop, and much was learned. The results of the workshop will be used to expand guidance on uncertainty for decision makers. There was a discussion on the merits of delaying release of NUREG-1855 Revision 1, to take advantage of some of the lessons learned from the workshop. The NRC staff was of the view that the planned revision should not be delayed and provided the basis for that view. Industry noted that the NRC should not wait a number of years for the next revision to take advantage of the lessons from the workshop. There was a discussion about aggregation of risk within the context of uncertainty. EPRI staff acknowledged that EPRI is doing some work in this area and discussed sharing the document they are putting together with the NRC Office of Nuclear Research (RES) through their existing Memorandum of Understanding. The NRC working group leader stated that the white paper being developed by industry for review by the NRC will discuss some aspects of aggregation of risk and it might benefit the groups to wait until the white paper is reviewed to discuss this issue in more detail. He also stated that NUREG-1855 currently has good guidance, but there is a lack of general awareness of the contents of the document.

## Topics for 2015

The NRC RISC Chair kicked off the discussion with a historical perspective on risk-informed initiatives, stating that without full industry engagement, efforts have not been successful, even if the NRC is fully committed. With that in mind, he asked industry to discuss their potential topics first to see where there was agreement on the issues at hand.

The industry RISC co-Chair started by noting the success of the RISCs and specifically the working groups. She attributed that success to keeping the focus of the first efforts manageable. She cautioned the committee members to keep that in mind as we move forward, take on the appropriate topics and achieve results. She explained that she believed

that there are two categories of topics that should fall within the purview of the RISC committees; topics that the committees need to be simply cognizant of and topics the committees should take significant interest in driving. To that end, she discussed the rollout of NFPA-805 and using RISC committees to avert similar challenges. The industry noted the need to look at the challenges going forward, particularly in the areas of external flooding and the need for realistic hazard analysis. The industry co-Chair introduced the first of the industry topics, development of methods to support realistic external hazard analysis, explaining that it encompassed more than flooding and seismic concerns. During the discussion of external flooding, NRC staff gave a brief synopsis of a recent Commissioner's Assistant Note (CA Note) on the probabilistic flood hazard plan. NRC staff agreed that we need to do some work in this area, but also that the RISCs should stay informed. As a part of the discussion, the participants discussed the fact that the flood research plan in the CA Note projects the completion of the flood research plan in 2022. The NRC staff shared that there were deliverables throughout the plan and there would be no need to wait until 2022 to use the results of the efforts. At the conclusion, the RISC members requested a high level discussion of the plan at the next public meeting. The industry presented their second topic, treatment of external hazards in risk-informed regulation, explaining that the first topic was establishing the methods and the second topic was the practical application of those results (e.g. ROP).

NRC staff discussed two initiatives that the RISCs needed to stay cognizant of but not necessarily steer: the Risk Prioritization Initiative (RPI) and the Risk-Management Regulatory Framework (RMRF). While not taking an active effort to steer the initiatives, the NRC staff stressed the committees should have some feedback mechanism into the effort. The NRC staff shared some history with risk-informed initiatives and the pockets, but not overall success, of the efforts. The RMRF initiative has the opportunity to provide more overall success with risk-informed regulation. The industry commented that they have formed a team to study the RMRF initiative and provide white papers on the options in the coming months. The RISC members agreed that a discussion of the status of RPI and RMRF at the next public meeting would be beneficial to the groups. The NRC RISC Chair discussed, and NRC staff expanded on the topic of crediting "flex" equipment in licensees PRAs. It was agreed that this was a specific topic of interest to both the NRC and industry, but it wasn't clear that the topic would warrant a working group at this time.

#### Next steps/Closing remarks

The NRC RISC Chair closed the meeting stating that there was good discussion and both the NRC and industry RISCs will need to have some more discussion prior to making any decisions on moving forward on these (or other) topics. The primary focus of the next meeting, tentatively scheduled for early March, will be the working group white papers and the next steps for completion of their work.

Enclosure:

List of Attendees

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NAME	MMontecalvo	SWeerakkody
DATE	1/ 13 /2015	1/ 13 /2015

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# **LIST OF MEETING ATTENDEES**

Name	Organization
Bill Dean	NRC
Steve Dinsmore	NRC
Anders Gilbertson	NRC
John Monninger	NRC
Joe Giitter	NRC
Sam Lee	NRC
Mary Drouin	NRC
Rich Correia	NRC
Brian McDermott	NRC
Sunil Weerakkody	NRC
Victoria Anderson	NEI
Michael Montecalvo	NRC
Fernando Ferrante	NRC
Dimitri Lutchenkov	X-energy LLC
Brittany Guyer	MIT
Donnie Harrison	NRC
Maria Korsnick	CENG/Exelon
Rick Grantom	CRG LLC
Tony Pietrangelo	NEI
Joe Pollock	NEI
Sue Perkins-Grew	NEI
Jim Chapman*	Scientech
Doug Copeland	NRC
Bob Rishel	Duke
Dave Gennardo	NRC
Alayna Pearson	NRC
Michael Tschiltz	NEI
Paul Harden	First Energy
Stuart Lewis	EPRI
Scott Moore	NRC
N.P. Kadambi	Consultant
Dan Dorman*	NRC
Ruth Thomas*	Public
Doug True*	ERIN Engineering
Gareth Parry*	

<sup>\*</sup> Participated by teleconference